VOL. IX.-No. 60.

NEW YORK, AUGUST, 1890.

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PLAIN TALK.

VOL. X

NEW YORK, AUGUST, 1890.

No. 60

A Pioneer Boy's Adventure on the Missouri Border.

C. H. GROVER.

OOKING backward to that time, and considering the circumstances, as I have often done, I have to confess that I can find no tault with his parents. They did the best they could. If Dan had passed his first night from home at Clymer's, as he was expected to, he would have had no adventure and there would have been nothing to tell.

Here are the simple facts: Seth Burton, in early times, settled near where Platte City, Missouri, now stands. In trying to get homes for his children, (the most of whom were girls) he expended all his money and even went in debt. Harder times came on, there was absolutely no market for farm products, and Mr. Burton gladly accepted the position of miller for the Potawatomic Indians. He went with his wife and four children (the rest had married) to the Indian town on Sugar Creek, a part of the country now

included in Kansas. He faithfully applied to his debts all he could save from his small salary. At the end of his third year of service, there remained unpaid but four hundred dollars, which sum he now had on hand. To send this to his creditors, was no

easy matter. His salary had been paid in silver; but, with considerable difficulty, he had exchanged half of it for gold. There was no paper money to be had. At that time none of

the modern conveniences for travel or for the transmittal of money existed. The former was done on horseback or in ox-wagons; money had to be carried by private messengers. The only messenger Mr. Burton had was his oldest son, Dan, then well on in his sixteenth year. He was small of his age, slender

but very strong and ctive. Dan had often made the same journey, as several of his married sisters were still living in Platte, and he was quite willing to go again, as he was told he could remain there till the next spring and attend school. The distance was one hundred and twenty-five miles along the border of Missouri. On the west side it was a wilderness, uninhabited and wild; on the east was an occasional cabin, but mostly too far from the road to be seen or conveniently reached. On the road from Sugar Creek to the neighborhood of Westport, seventy-five or eighty miles, a traveler, would really see but one.

Such was the situation, when, early one morning towards the last of October, Dan mounted his horse and rode away. He carried the money and a few clothes in a small pair of saddle-bags, thrown over his saddle and covered

with a blanket, after the custom of the country. All day he jogged along, alone, without meeting or seeing any one When he came to the road leading off to Clymers, the sun was two or three hours high, and he saw he would have time to push on ten or twelve miles further, and stay at a cabin at Cold Water Grove, about a mile from the road. He knew nothing about the people living there, but supposed they would keep him over night.

It did not occur to him that he might be running into danger, till he had passed the Clymer road. When he began to think of it, he was greatly troubled and wished he had stopped at Clymer's, who was an Indian trader and a friend of the Burtons. He had gone too far, however, to turn back, and resolved to go on and make the best of it. The sun, almost concealed by the thick haze and smoke of Indian summer, was touching the horizon and the Grove was rising slowly into view. Following a dim path across the prairie in that direction, he came to a corn-field intervening between the main road and the cabin. He followed

the fence around, first on the east, then on the south, and again on the west to the house, which was situated near the center of the enclosure, but only a few rods from the western fence. Just north of the corn-field was a dense thicket of underbrush, with here and there an oak tree, the whole covering perhaps a hundred acres, and being dignified by the name of "The Grove," or sometimes "Cold Water Grove," the latter from fine springs near

To the east of the field a thick underbrush encroached upon the road, the ground broke into hills, and ravines, draining the superfluous water off to a little brook, a hundred yards distant, formed by a perennial spring. These

features of the neighborhood, Dan carefully observed, as he approached the house. An old man, leathery and bent, stood in the yard, eyeing him with careless indifference. To Dan's courteous greeting and inquiry if he couldget lodging for the night, the old man returned an affirmative answer, coupled with the information that he would have to wait on himself, and be satisfied with the poor fare he could offer. He was directed to take his horse to the spring for water, and then to tie it under a rail shed near by, covered with corn-stalks; he would find corn for his horse in the field close by.

Dan followed the instructions, and returning from the spring, he tied his horse under the shed, gathered corn crough for a good feed, and after putting it into the trough, for the horse, he removed the saddle and bridle hanging them with his blanket on the end of a rail left



projecting for such purposes. With the saddle bags on his arm, he walked towards the house which he now examined with more care. He discovered it to be a low story and half cabin, constructed of unhewn logs. It was built double, that is with two lengths of logs, forming two goodsized rooms below, with only one chimney, which was in the south end of the cabin. Either room, was entered dy a door on the east side and an inside door opened from one room into the other. Neither room was provided with a window. The door had been roug'ily formed by slabs, split by hand, from logs, and smoothed off with an axe. The floor was of the same material. In front of the house, the fence, without gate or bars, had been left lower than elsewhere, for convenience in climbing it. Tall corn, still standing but dry, had been cultivated as closely to the house as possible.

Outside the fence were some cows and young cattle. Some standing, others lying down, but all resting and chewing their cuds. Dan stood a minute outside, talking with the old man, and then without invitation entered the room with the chimney, judging from appearances that it

was the common sitting room.

A woman, without speaking a word, offered him one of the two chairs visible. He placed his saddle-bags near him in a corner, sat down and looked around. No evidences of ordinary comfort met his view, only the poorest furniture, and but little of it; a square table, some wooden stools, and a couple of chairs; in one corner, a bed, in the opposite a low platform, which did service no doubt as a sleeping place for the old man. "A supper of corn bread, fried pork and coffee was soon prepared, and eaten in silence. The woman, the old man's daughter, Dan judged, said something about her husband being absent, and expecting him

home during the night.

Having arisen unusually early and travelled pretty constantly all day, Dan was weary, and wished to retire. Before doing so, he went out to see how his horse had stood the journey and if anything more was needed' This was the first time he had left the saddle-bags out of his sight. He did not wish any one to discover how heavy they were. He was surprised to observe they had been moved by some one, during his absence, and one of the straps was unbuckled, as if some one had attempted to explore the contents, and had been interrupted before accomplishing it. He expressed his wish to get to bed, and as the old man had lain down the woman took up a greasy lamp, made of a gourd, with some lard in it and a wick of twisted cloth' and told Dan to follow her. She passed into the north room, and up a rude, narrow stairway to the room or attic above, which was without partition forming but a single large room. She pointed to a bed on the floor at the south end, telling him he could sleep there.

Waiting till he reached the bed, she withdrew, taking the lamp with her, and leaving Dan in darkness. This was but for a moment, however, as on returning to the room below, enough light from her lamp streamed up through the chinks in the puncheon floor to enable Dan to see indistinctly every thing in his room. There was but little to be seen, and he took off his coat and lay down, putting the saddle bags, behind him at the head of the bed. He extended himself on the bed and tried to sleep, but his solicitude had returned in full force, and led him to reconsider everything that had occurred since his arrival, and he was ferced to

confess that he found no grounds for suspicion.

In the first place, the occupants of the cabin held out no inducements to travellers to stop there, and the dim path leading from the military road was proof positive that few travelled it. The old man and woman had but yielded to the hospitality common throughout the country, and had permitted him to share their rude shelter and cheer, rather than turn him out into the houseless prairie. Even the tampering with the saddle bags, during his momentary absence from the room proceeded most likely from curiosity, or perhaps they were in the way and had simply been put somewhere else. Evidently he had nothing to fear, and finally he fell asleep:

How long his slumber lasted he did not know, but it was auddenly broken by a noise in the room below. He sat np in the bed and listened, he remembered that before going to sleep the light had been extinguished, the woman had, as he supposed gone to bed, as everything was quiet. Now the light was streaming up through the floor, and he heard voices, men's voices, in low conversation. Noiselessly he crept out of bed, and approaching one of the largest crevices he peered down into the room. The old man and woman were not visible, whether they were in bed or had left the cabin he could not tell; he never saw them again. A sight met his eyes, however, that under the circumstances might well have made the bravest tremble. Sitting at the table were two large, bearded, brutal looking men. These were facing the middle door which stood wide open. Here sat another man, as cruel and beastly in appearance as his companions. He could not distinguish all their words; but enough to know that he was the subject of their conversation.

He listened more intently, and soon heard enough to convince him that either the old man or woman had imparted all the knowledge they had of their guest, and their suspicions as to what he had in his saddle bags. The opinion was expressed that he carried a large sum of money, much larger, indeed, than he really had. It was evident, too, that the men intended to possess themselves of it, at their convenience; knowing that escape from the upper room was impossible, without passing through the lower one. For some reason, Dan knew not why, unless there was a camp of hunters at the spring, they expressed a wish to dispatch him as quietly as possible, and thought it best to overpower

him while asleep

Dan, thoroughly aroused as to his danger, endeavored to discover some means of escape. He wore Indian moccasins and could step as stealthily as a panther. It occurred to him that he might approach the stairway, descend into the north room, and steal out at the door unperceived. He threw on his coat, raised the saddle bags and groping his way along the side of the building to the stairway peered down into the north room. His heart sank within him, for he discovered that the room was illuminated by the lamp as distinctly as the south one, and its whole interior in plain view of the men at the table. He had expected to find it otherwise, and now, thoroughly terrified, he no longer knew which way to turn. If he advanced, and freely offered the robbers his money, and begged only for his life, he knew they would murder him to prevent his informing on them. He tottered back to his bed, and again lay down; just in time to escape detection, for he heard one of the men say to the other he would softly go up stairs and see if the boy was as asleep.

Dan instinctively thought it best to feign sleep as it would result in certain and immediate death to let them know that he had discovered their designs. He therefore drew the cover over him, with his face towards the stairway, and kept his eyes nearly closed. He heard the robber gently ascending the stairs, carrying the lamp in his hand. At the stairs, he stopped to listen; he seemed uncertain about Dan's being asleep, and cautiously approached to the middle of the room. There he again paused, held up the lamp, so that the light should fall full upon Dan's face.

À full minute he stood there, gazing with fierce, pitiless eyes, at Dan's pale face, and then silently withdrew. Dan made a slight movement as if partially awakened. The man again stopped, turned his face towards Dan, listened a moment, then went down stairs and joined his companions. A short consultation followed his report, which was ended by one of them saying, "Oh, your light probably disturbed him, and nearly woke him up; he will be sound asleep again

in fifteen minutes if we keep still."

Dan inferred from this that he would have a brief respite but no thought could suggest any possibility of escape. He was but a helpless boy, against these powerful men, who would kill him with as little compunction as they would feel in killing a rat. He no longer thought of escape; he realized that he must die; and he wondered what means they would employ. Most likely, he thought, they would spring upon him, two would hold him fast, while the third stabbed him in the heart, or cut his throat. Would it be very painful and what would they do with his body? They would, he thought, throw it into the creek, or some dark ravine, where the wolves would cat his flesh and fight over his bones. All that would be left, the snows of the coming winter would hide from view, and in melting next spring

would bear away and scatter over the valley. His fate would never be known. His father, his poor, dear mother, his sisters and brother, he thought of them all; of their anxious sufferings, and wonderings why he did not return. He could not endure such thoughts any longer and determined to make the one effort left to escape. The one that had occurred to him at first. Even failure would but hasten death by a few minutes. He rose, slipped his arm through the loops of the saddle bags, and was just starting to the stair-way from the bottom of which he intended to make a desperate dash for the outside door. Just at this moment he heard one of the cut-throats say, "There's no use waiting any longer, he must be as sound asleep, now, as he ever will be; what's the difference any way? He can't give many yelps before we'll have him by the throat. Besides if he yelled all night, I don't believe it would do him any good, or us any ham."

They arose and started, Dan heard them on the stairway, the first was now at the top, the other two close behind him: the hindmost one held the lamp in one hand, in the other a hatchet; the fore-most man held a large bowie knife. They had not caught sight of Dan, glaring at them from his corner

like a trapped wild cat.

At this moment a frightful clatter of horses was heard, running at full speed, and now in front of the house. The robbers, panic-stricken, imagining they were about to be captured by a squad of U. S. troops, hustled down stairs and out into the yard.

Quick as lightning Dan followed to the foot of the stairs, but before he could reach the outside door he heard one say "Oh, it's nothing but a drove of loose horses, better look out for the boy." The hind-most man ran back into the house, and Dan missed meeting him only by jumping behind the middle door, unperceived. All three of the robbers hurried up the stairway, and bent on nothing now but to secure their prey, made a rush for the bed. In their haste and agitation the light had been extinguished, leaving them in darkness. With their hands they explored the bed, felt round it and in the corners of the room, but found nothing.

Astonished, but still believing the boy to be in the room two stationed themselves at the stairway, and the third went to the fire in the middle room to relight the lamp. He returned immediately, but a single glance around the bare walls sufficed to convince them that they were the sole occupants of the room. Correctly surmising the truth of the matter he rushed out of the house in search of the fugi-

tive, whose movements I will now relate.

When the men had re-entered the house and were hurrying up the stairway, Dan glided out through the open door, turned the corner of the house, and in a moment hid himself in the corn field. His first thought was to run down to the shed and get his horse, but instinctively he saw the danger of this, as the robbers in anticipation of this, would reach the shed almost as soon as he could. He then remembered the thicket to the north of the field, and towards this he ran as fast as he could. He passed the fence, crossed the road running north, and entered the underbrush to the right. One of the men, on emerging from the house, ran to the horse-shed, but instantly returned reporting everything quiet in that direction.

The night was moonless, but also cloudless, the stars over head were faintly visible, but towards the horizon, and on the earth everything was veiled by the thick, heavy haze. Objects were perceptible but a short distance; beyond was impenetrable darkness. The robbers rightly supposing the fugitive would seek the nearest hiding place, looked in that direction, and carefully examining the ground by the aid of the lamp, they discovered his fresh tracks in the soft dust, but could not follow them in the harder soil of the field. From the slight traces left they inferred he had betaken himself to the thicket. It seemed probable, too, that trusting to the darkness, he had even passed beyond it with the intention of making his way back to Clymers. These opinions they exchanged with each other as they walked along. It was thought best by them to hurry along the road, carefully examining each side of it, as far as the prairie, then turn to the left, and go round as far as the

path leading into the military road.

Dan, concealed in the brush, was sufficiently near to hear all this, and saw the advantage it gave him. As soon as

they had passed, he emerged from the brush behind them, passed through the cattle in front of the house, where everything seemed to have assumed its accustomed quiet, and found himself at the shed. Here instead of one horse, he found four tied, three of which, he easily divined, belonged to the robbers.

He hastily saddled and bridled his mare, and was about to mount, when a new thought struck him. He could hear nothing of the robbers, so unfastening the three horses, he led them one at a time through the slip gap in the fence, cut their halters and let them go, which they did at full speed in the direction taken by the herd of loose horses a few minutes before. He then mounted his mare, feeling free from the danger of pursuit, and rode west through the corn field, crossed the fence, and soon regained the military road. Here, neither seeing, nor hearing his pursuers, he considered it most prudent to ride in the direction of Westport.

Cautiously and with as little noise as possible he rode at first, but when he considered that he had placed a safe distance between himself and his would-be murderers he urged his mare to a brisk trot, nor drew rein till he reached Grand river, ten or twelve miles distant from the Grove. He knew there was a cabin here occupied by a poor family and he had

thought of stopping with them for breakfast.

Day was just breaking and much to his surprise and satisfaction he rode into a camp of hunters, bound as he afterwards learned for the Marias des Cygnes, and its tributaries. He found them engaged in preparations for breakfast. The men anxious to know how and why a boy had suddenly dropped among them at such a time and place, formed a circle around him to hear his story. Cautiously at first, but reassured as he proceeded by the appearance and sympathy of these kind-hearted men, he informed them who he was, where from and whither going. He told a simple, straight, forward story of his night adventure, neither disguising-distorting, nor magnifying anything.

Fierce indignation against the cut-throats, who for money would have murdered a helpless boy, was expressed on all sides. A brief consultation followed, then volunteers were called for, and in a few moments six determined men were rapidly riding from the camp in the direction of Cold-Water

Grove

Dan never saw them afterwards, nor heard the result of the expedition. Having fed his horse, and breakfasted with the hunters, he rested and slept a few hours, and then resumed the road towards Westport, where he arrived some time before night. The next evening he reached the end of his journey, and a few days afterwards, his brother-in-law paid the money to Mr. Burton's creditors, and canceled his debts.

Dan attended school during the winter, studied hard, and returned the following spring to his home at Suger Creek. He never informed his parents of the danger he had incurred on his way to Platte, nor did they ever know how nearly to death they had unconsciously exposed their boy.

An Anecdote of Washington.

DURING the Revolutionary war a piece of heavy timber was being raised for army purposes, and a corporal was overseeing it done, shouting to the men who were lifting, "Heave away! Yo, heave!" A horseman riding along said to him: "Why don't you lay hold yourself, and help these men lift? It is more than they can do." "O," replied the officer, "I am a corporal." Then the man on horseback dismounted and laid hold of the timber and lifted with all his might. The work done, the man said: "Corporal, when you have not enough men to attend to a job like that, send for your commander-in-chief." It was Washington.

THERE is nothing like a fixed, steady aim, with an honorable purpose. It dignifies the nature and insures success.—Stopford Brooke.

WE HAVE received our first copy of Plain Talk and are all very much pleased with it.—Miss H. C. H. , Albany, Oregon.

THE AMATEUR PHOTOGRAPHER.

BY I. M. S. HAMILTON.

FOURTH PAPER.

I T HAS become quite an ordinary thing to caricature the amateur photographer in the comic weekly of the day, and to picture him working under all kinds of disadvantages to get a "snap shot" at some object or distinguished person and in the imagination of some, his murder has been justified for daring to point his camera at an undisguised individual. Against this we must protest; the camera should be considered as an instrument for good, rather than evil, and the amateur photographer considered as a person more worthy of commendation than condemnation.

The possession of a camera instantly creates in the mind of the possessor a thirst for the discovery of the beautiful in nature, the eye is ever on the alert for more scenes to picture, and gradually an artistic sense is developed which is of value to all and especially to the amateur. Nature becomes an open book to him over which he never tires; every piece of moorland or mountain glen, every river or brooklet with its miniature cascades becomes a page or paragraph conveying to his mind its instruction, teaching that life is worth the living. The amateur can enjoy nothing which has not some feature of beauty on account of artistic taste which the camera has developed. To prove how effective the camera has become; an eminemt divine has recently permitted himself to be photographed for a Sunday newspaper in forty different positions showing his facile adaptability for all moods supplicative or otherwise. On the other hand the ordinary mortal with no soul for pictures is apt to regard the amateur with his camera as a nuisance, and to such an extent has he carried his antipathy that he labels all things that he may possess "Private property all rights to photograph reserved." While we should not counsel encroachment upon private property without permission, we still think the amateur should not hesitate to transfer the beautiful to his plate whenever and wherever he may get the opportunity, and thus by his instrumentality permit others to enjoy what selfishness would deny them

When the amateur leaves the out-door or landscape photography and attempts in-door or interior views, he must remember that the difficulty he labors under in getting a good interior view, far exceeds that which he would have in taking an out-door or landscape view. Without doubt the corner selected for the first trial of the camera within the home circle will be that which contains the most light, possibly a corner in which two windows are situated and the sitter is placed directly between them with all the necessary arrangement of furniture to produce, it is thought, a pleasing result; but if the amateur follows this line of procedure the result will be anything but pleasing. While as much light as it is possible to get in the room is most desirable, the amateur should avoid cross lights. If you are fortunate enough to possess two windows in the corner of the room, close the one through which the lesser amount of light comes and hang a piece of cheese cloth netting to reflect the light upon the dark side of the sitter. If a sheet is used to reflect the light its effect will be illogical, as the dark side of the sitter will appear lighter than the dark side in the finished print. To avoid this something which will not reflect an intensely white light should be used.

Great care should be given in timing the exposure and as notwo rooms may contain the same amount of light, it is perhaps, best to use a rapid plate for interior views. Only experiment with the plate used will determine the time required for the exposure. We have seen a good interior view in which the plate was exposed thirty-six hours, but the interior was very diunly lighted.

For interior views a wide angle lens should be used, especially if an interior of a dwelling and not a portrait is desired, as more space is covered at shorter range by the wide angle lens.

If the family should number among the circle a baby, it will probably be the first called upon to do duty as a sitter, for who among us has not expressed the wish, at some time, to have the baby's picture as it appears upon some particular occasion? It is well to bear in mind, though, that when-

ever the baby is the object focused upon, the most rapid plate that can be secured should be used, for who ever saw the baby that could be still for four seconds at one time while awake? Even with the most rapid plate the baby may get in one or two moves before you can cap your lens, and with a slow plate it would appear that a half a dozen babies had got tangled up in a knot, and each was endeavoring to extricate itself. The amateur should not expect too much from his lens, he must not suppose for instance, that with an ordinary view lens, he can produce a good portrait. Of course he can produce a likeness with any lens, but he should not be surprised if his production in the portrait line, with an ordinary view lens did not equal the finished product of the artist with a portrait lens.

ished product of the artist with a portrait lens.

The introduction of the "flash light" has to a certain extent made the amateur independent of the day light for interior views, as by the use of the "flash light" he can photograph the home circle upon the darkest night as quickly as he could out of doors upon a bright, sunny day. Great care should be taken when using this light, as the action of the magnesium powder is very rapid like gun powder; great care should be used in touching a light to it. Use a long stick or something by which you can keep at a distance. The light produced is an intense white light and the flash is so sudden that the eyes are liable to close involuntarily, giving one the impression that all were asleep when the picture was taken. To prevent this, let a light be placed behind the camera which will serve to keep the pupil more natural and keep the eyes accustomed to light. The vessel containing the powder, which should be a shallow dish, should be elevated above the camera and a little to the rear. Hang a sheet so that a reflection can be thrown upon that part of the room you desire to photograph and see that all things are at the proper focus within the range of the lens. Remove the cap from the lens before touching off the powder and replace the cap when the light is extinguished. An ounce of powder is not too much to produce a distinct picture. Be careful not to have anything near the flame of the powder which could be ignited, and ventilate your room as soon as you have replaced the cap upon your lens.

Emergencies.

SNAKE BITES—Apply ammonia freely to the wound and give whiskey freely.

LIME IN THE EYE—Clean the eye with a feather or camel's hair brush; bathe with weak vinegar and water.

FAINTING.—Put subject on back, perfectly level. Air. Ammonia to the nose. Gentle stimulant when patient can swallow. Keep extremities warm.

SUNSTROKE.—Place the patient in the shade; remove clothing; douche with cold water freely; rub the head and body with pieces of ice.

For Dog Brre.—Suck the wound freely; then burn it with lunar caustic or with strong carbolic acid, by means of a stick or the wood end of a match.

For EPILEPTIC FIT.—Let the patient inhale nitrite of amyl. Place him in a position so that he will not injure himself, loosen his clothing and wait for convulsions to subside

Burns and Scalds.—If on an extremity, immerse the part in a hot bath, and wait till the doctor comes. If elsewhere, apply freely, vaseline; lard and flour, well worked together; white-lead paint; olive oil. Dress to exclude air and keep the part warm.

Antidotes.

FOR STRYCHNINE,—Chloral, 30 grs., repeated; bromide of potassium, 60 grains, repeated; chloroform or ether, by inhalation.

FOR ALKALIES. Vinegar, freely; acetic acid and water; lemon-juice; dilute muriatic acid; any dilute acid.

FOR OPIUM.—Strong coffee, freely; tincture belladonna, r5 drops, repeated in 15 minutes if necessary.

For ACIDS.—Lime water; chalk and water; magnesia and water; ammonia and water; ashes and water; tooth-powder in water; and soapwater.

HOW TO DO IT.

Original contributions solicited for this page. Send sketches, no matter how rough with descriptions, and when possible, illustrations will be made.

Aid for the Drowned.

T IS to be hoped that none of PLAIN TALK'S readers will have occasion to make use of the following instructions regarding the treatment of the drowned, but accidents do happen, and it is well to be prepared for them. These rules were first given to the public by the State Board of Health of Michigan. They should be carefully studied and thoroughly understood.

FIRST.—Remove all Obstructions to Breathing. Instantly loosen or cut apart all neck and waist bands.

Turn the patient on his face, with the head down hill; stand astride the hips with your face towards his head, and, locking your fingers together under his belly, raise the body as high as you can without lifting the forehead off the



ground (Fig. 1.), and jerk to remove mucus from the throat and water from the windpipe; hold the body suspended long enough to slowly count ONE, TWO, THREE, FOUR, FIVE, repeating the jerk more gently two or three times.

SECOND.-Place the and maintaining all the

while your position astride the body, grasp the points of the shoulders by the clothing, or, if the body is naked, thrust your fingers into the arm-pits, clasping your thumbs over the points of the shoulders, and raise the chest as high as you can (Fig. 2) without lifting the head quite off the ground, and hold it long enough to slowly count ONE, TWO, THREE. Replace him on the ground, with his fore head on his flexed arm, the neck straightened out, and the mouth and nose free. (Fig. 3.) Place your elbows against your knees and your hands upon the sides of his chest over the lower ribs, and press downward and inward with increasing force long enough to slowly count one, two. Then suddenly let go, grasp the shoulders as before and raise the chest (Fig. 2); then press upon the ribs, etc. (Fig. 3) These alternate movements should be repeated 10 to 15 times a minute for

an hour at least, unless breathing is restored sooner. the same regularity as in natural breath-

THIRD.—After breathing has com-menced.RESTORE THE ANIMAL HEAT. Wrap him in warm blankets, apply bottles of hot water, hot bricks, or anything to restore heat. Warm the head nearly as fast as the body lest convulsions come

Rubbing the FIG. 2. body with warm cloths or the hand, and slapping the fleshy parts, may assist to restore warmth, and the breathing also. If the patient can surely swallow, give hot coffee, tea, milk, or a little hot sling. Give spirits sparingly, lest they produce depression. Place the patient in a warm bed, give him plenty of fresh air, and keep him quiet.

AVOID DELAY. A MOMENT may turn the scale for life or death. Dry ground, shelter, wainth, stimulants, etc., at first are nothing, -ARTIFICIAL BREATHING IS EVERY-

THING,—is the one REMEDY,—all others are secondary.

Do not stop to remove wet clothing before efforts are

made to restore breathing. Precious time is wasted, and the patient may be fatally chilled by the exposure of the naked body, even in the summer. Give all your attention and effort to restore breathing by forcing air into and out of the lungs. If the breathing has just ceased, a smart slap on the face, or a vigorous twist of the hair will sometimes start it again, and may be tried incidentally, as may also pressing the finger upon the root of the tongue.

Before natural breathing is fully restored, do not let the patient lie on his back unless some person holds the tongue forward, which may be done with a towel or handkerchief. The tongue by falling back may close the windpipe and cause fatal choking.

If several persons are present, one may hold the head steady keeping the neck nearly straight; others may remove wet clothing, replac-ing at once clothing which is dry and warm; they may ilso chafe the limbs. and thus promote





around the patient and excluding fresh air.

Do NOT GIVE UP TOO SOON. You are working for life. Any time within two hours you may be on the very threshold of success without there being any sign of it.

How to Raise the Tiger Beetle.

HE tiger beetles all have metallic colors and are usually very brilliant beneath the body. They were classified as Cicindella or Torchbearers, and may have at first been regarded as phosphorescent, but they are not. They are savages with the taste of cannibals. They are swift runners and quick flyers, and not easy to capture. The larvæ are fierce and only one can be kept in a box, as they will devour one another. They burrow in the ground. Old tin cans, such as canned fruit is preserved in, with a fine wire screen cover will be just the thing to keep them in. Fill the can two thirds full of moist earth and press it in with an inclined surface like a side hill.

Make a hole in the earth with the end of a pen holder, and the larva will take possession of the hole at once for its hiding place. Feed with flies, fleshy caterpillars or small pieces of fresh meat once a day. Remove all remnants daily. Moisten the soil carefully once or twice a week. Keep damp but not too wet, as wetness favors the development of destructive parasites. Keep the box in a dark or shady place. The larva will feed four or five weeks, but the pupa is developed in about ten days. These savage beetles are interesting for observation. The larva are to be found on sloping banks in the vicinity of the place where the beetles are found on the wing.—A. W. P.

LIKE the paper very much," writes Oscar M. Chase, East Holden, Me.

HE principal of one of the largest and best-known schools on Long Island, wrote recently: "I received one number of PLAIN TALK, and was pleased with its information abounding on every page. I hope to see PLAIN TALK

DLAIN TALK for June had an excellent story entitled "Fritz," by Jennie Fairman Smith, in which she shows that young Germany may teach young America lessons in politeness and also how it is possible for a poor boy to climb step by step life's difficult ladder successfully. It thin step by step hie's diment lander successing. It has a useful paper upon photography for amateurs, also tells of the jolly life of the young Chautauquan. The 'plain talks' upon Geology, Natural History and all sorts of items make it a useful and readable magazine for the young.—Rock County Banner, Clinton, Wis.

PHILATELY.

ALVAH DAVISON, - - - - EDITOR,

176 BROADWAY, NEW YORK.

CHICAGO seems to be loosing its grip on matters philatelic. Of all the collectors in that big village, not a solitary one put in an appearence at the convention. What is the matter, boys, saving money for the fair, or have you spent it all in getting a site.

The Canadian Philatelic Association held their Convention in Montreal shortly after their American brethren got through. They usually have but a slim attendance and the members don't take the interest in their Association they should. It is thought by some that ultimately the Canadian Association will become a branch of the American, as that will give the members more and better privileges than they can enjoy in their own, while a combination of both Associations would result in mutual benefits.

The republican party or some of them are still clamoring for a reduction of the postage to one cent an ounce. A recent cartoon in one of the comic papers calls on the party to redeem its platform pledges, one of which is the reduction mentioned. If it is done, what with increasing the carriers' pay and reducing their hours of labor, the post office department at the end of their fiscal year will hardly show as good a balance of profit as it has been doing, but if the surplus needs reducing—as many claim it does—the letter rate is a good place to commence, as it effects to a more or less extent every inhabitant of the country.

Mr. C. F. Rothfuchs the genial dealer of Washington, D. C, has been giving a reporter for the Washington Sunday Herald a dose of philatelics as is evidenced by a column and a half article in the issue of August tenth. Brother Rothfuchs ought to know by this time that the name of our glorious association is not the National, but the American, yet this I imagine was but a slip of the tongue. Such articles as this do much for the cause of philately, as they serve to make it known to many who never see a stamp paper, and yet who may have a leaning toward the pursuit. lectors would strive to have an article occasionally in their local paper, the ranks would fill up much faster than they now do, and it would be of individual benefit to each, as the more collectors we have the greater will be the knowledge concerning stamps, the more will the pursuit be elevated, and where we now find one solitary philatelist in a village we could hope in the future to find a society, a consumation devoutly to be wished for by all who have the interest of stamp collecting at heart.

For a summer month the one past has been particularly active in stamp matters in the city. This was caused by the annual convention of the American Philatelic Association being held, at which the officers for the next two years were announced. They are as follows: President, John K. Tiffany; Vice President, Chas. B. Corwin; Secretary, M. F. Walton; Treasurer, Chas. Gregory; International Secretary, Joseph Rechert. Much interest was manifested in the result. as a law of the Association stated that each officer must reside in a different State, while Messrs. Corwin and Reichert are both from the State of New Jersey. After a long and bitter debate the President declared that both men could take the offices if the law mentioned was changed during the convention. This was done, so according to the President's opinion they are both elected, yet many still claim that their election is illegal and their ground for so reasoning is this: The polls for the election closed at the opening of the convention, at which time the officers were either elected or not elected. Four days after the polls closed the laws were changed, but how could these men take offices under laws passed four days after the election was over? Were they not voted for and elected under the old constitution? This point was brought forward by Mr. Walton, but the celerity with which he was-figuratively speaking-sat upon by the chair, led many to think that gag law was being used. convention of the Association lasted four days, this being one in excess of all previous conventions. On one of the evenings the visiting members were escorted to Manhattan

Beach where a sumptuous banquet was given in their honor by the metropolitan members. Here they were so stuffed with good things that they voted the New Yorkers, "Bully Fellows." The members were given an opportunity to roam around a little, which many of them improved in various ways.

A GREAT COLLECTION.

DURING the month I spent a few days at the home of Mr. H. E. Deats, at Flemington, N. J., and although it seems superfluous for me to mention what is probably commonly known in regard to his stamps, yet he is always acquiring so many new things, that I venture to say a little on the subject. Mr. Deat's collection of revenue proofs is the finest in the United States, and probably in the world, and that is a pretty bold assertion, isn't it? But when we consider that he has bought proof upon proof, collection upon collection in its entirety, and that collections which were far famed for their completeness have become simply a portion of his, then we can begin to get an idea—and only an idea—off he immensity and value of his possessions in the stamp line. If you were to start before breakfast to look over his sheets, the shades of night would find the pleasing task still undone, for fast as you could go over them new ones would take their place, until in desperation you would cry "Hold, the night cometh, and the arm is weary."

Our friend's latest acquisition is a beautiful set of the revenue stamps of Canada. These he has mounted on large sheets about 15 x 20 inches, to accomodate the long eigar box stamps. In the same fashion he has mounted a nearly complete set of the United States tobacco stamps, from the crude first issue down to the present one. There are many varities of these owing to the difference in the paper, some being on pink, others on plain and some on watermarked. The length of some of the stamps is very great, put he has solved the problem of mounting them by using the large sheets, and it is the only good method. Mr. Deats believes that there is a future for the revenue stamps, and I will probably have something further to say in that line at a later period.

A Prize for Stamp Collectors.

THE prize offered in the June number of Plain Talk for the best essay of not more than 250 words on "Why I am a Stamp Collector," was awarded to Walter B. Ogden, 410 10th st., Brooklyn, N. Y., and his essay is printed in this issue.

Another prize, a "Youth's Companion" stamp album, handsomely bound in leather, or a package containing a set each of the Flags, Arms and Portraits of Rulers of the World (as the winner may choose) is offered for the best essay of not more than 500 words on "What may be Learned from the Stamps of Gambia." Anyone may competeopen to the world. Essays must be in before October 10th.

Why I am a Stamp Collector.

THERE are various manias for collecting in this country—coins, stamps, curios, buttons, cigarette pictures, china, etc., but I think that of stamp collecting is the most popular. But many of the people seized with the idea of making a stamp collection give up their project before they have a chance to find out what advantages they would have derived had they persevered.

More history and geography can be learned from five dollars spent in stamps than from fifty dollars expended at an academy or college, and with less exertion and greater pleasure. Whoever beside stamp collectors know anything about Nowannugger or any of the Indian States. Certain it is that during the seven years I attended school, I never even heard of them. I remember that none but the collectors in my class knew what country owned St. Thomas. The principal himself did not know. Neither did he notice any mistake when the atlas declared Gambia to be a French possession. The philatelists did.

Ask an ordinary business man what values there are in the new issue, what people are represented thereon and what will he say? Ask him to explain the difference between engraving and typography or laid and wove papers,

and hear his excuses for his ignorance.

There are the reasons for my collecting stamps. I have found my mania extremely interesting, and have derived a good deal of pleasure and information from it. found it exceedingly instructive, and, besides, it has not been in the least expensive. - WALTER B. OGDEN, Brooklyn.

HERE is testimony as to the paying qualities of PLAIN TALK as an advertising medium; I have had two three line advertisements in your paper offering stamps for sale and received sixteen answers to the first and sixtythree to the second. Your paper is a good advertising medium. To one exchange notice I received thirty-seven answers, and to another eleven."-J. R., Illinois.

GAMES AND PASTIMES.

Contributions for this department are solicited in regard to every variety of indoor and outdoor amusement.

The Word Hunt.

HIS feature of PLAIN TALK grows more interesting each month, and while some drop out because of not having received a prize, others send in lists and keep up the interest. The winners for June with the base word Centumviral, are:

First prize to Albert Pennell, West Gray, Maine, 630

correct words, original list 685.

Second prize to Miss Emma L. Hauck, New London,

Conn., 624 correct words; original list 663. Third prize to Louis A. Hennick, Jr., Baltimore City College, Baltimore, Md., 513 correct words; original list

The word selected for the next word-building contest is

TUF-TAFFETA.

Note this particular: Hereafter all prize papers must be sent to Geo. D. Thomas, 14 High Street, Waltham, Mass., who is to have charge of this contest.

The rules governing the contest are as follows:

1. Only subscribers can compete but any one may send their subscriptious in with their list of works. Will not be allowed, and only words found in the body of Webster's Unabridged Dictionary, which will be considered a final authority in deciding all dispated points.
3. Prefixes, suffixes and abbreviations will not be counted, nor will plurals be

3. Prelixes, suffixes and abbreviations will not be counted, nor will plurals be above.

Only marked "obsole" will not be counted, unless they are still current in some one of their meaning, but spelt the same, count as one word.

6. Words of different meaning, but spelt the same, count one word for each.

7. No letter can be used more than once in the same word unless used more than once in the word or words used as a basis of the contest.

8. All lists must be written in ink (or on a type-writer) and must be alphabet.

8. The full name and address of the contestant must be written at the top of the first sheet, and also the word used as the basis of the contest.

10. In case of a close contest, the number of errors and the general neatness of he work will be taken into consideration in eartiful plurals.

The contest will close Sept. 10th, and the result will be announced in the next number thereafter.

The prizes are as follows:

The first prize will be any three of our new prize books; the second prize, any two of the books; the third prize any one. See list in advertising pages.

Answers to June Questions,

O TWO of the questions in the June number, Geo. E. Ugland of Philadelphia sends the first correct answers To the question "How Many" he answers "301"

He solves the problem of "Crossing the River," as

"First two natives go over, one native comes back and takes the other over, another native brings the canoe back and two Englishmen go over, leaving two Englishmen and two natives over, while one Englishman and one native is left. An Englishman and a native return, and two Englishmen then go over, leaving two natives on shore, one, and three Englishmen and one native on shore two. tive goes over and brings back another native, goes over and gets the other one and they are altogether again."

A. Test in Punctuation.

N THE June number two different sentences were given to be punctuated. The second was:

"King Charles I walked and talked three days after he was executed."

This was not difficult, nearly all agreeing to put either a period or semicolon after "talked". The other sentence

If Moses was the son of Pharaoh's daughter then he was the daughter of Pharas-oh's son.

was treated in a great variety of ways as witness the follow-

If Moses was the son of Pharaoh's daughter, then he was. The daughter of Pharaoh's son. If Moses was the son of Pharaoh's daughter; then he was the daughter of Pharaoh's; son,

If Moses was the son of Pharaoh's daughter, then he was the daug..ter of Pharaoh's, son.

If Moses was the son of Pharaoh's daughter then, he was the daughter-of-Pharaoh's, son,

If Moses was the son of Pharaoh's daughter, then he was the, (daughter of Pharaoh's), son.

If Moses was the son of Pharaoh's daughter, then he was the (daughte. of Pharaoh's) son. If Moses was the son of Pharaoh's, daughter, then he was the daughter of Pharaoh's son.

If Moses was the son of Pharaoh's daughter, then he was (the daughter of Phara-oh's son.) If Moses was the son, of Pharaoh's daughter, then he was the daughter of Pharaoh's, son.

Is any one of these correct? If so, why? If not, why not? Study the matter up. Think it over. If you are right defend the position you have taken and attack that taken by others. Schools are about to commence. Ask your

schoolmates and your teachers. Don't make a "son" and and a "daughter" both out of Moses. Somebody will get a prize worth having (a surprise, too) as soon after October 10th as it is possible to examine the papers sent in. Let them come at any time up to that date. And if you think the first one you send in can be improved on, why send another. Punctuation is a great art. Try to work out a little understanding of it from this contest. Now, then!

What is a Billion?

HE following is clipped from an exchange: "A billion in America is a thousand millions. In England a billion is a million of millions." Is this statement correct? If so, how so? If not, why not?

Can You Spell?

ICTATE the following sentence to your friend, and if D he spells every word correctly the first time, tell him he is a smart fellow; "It is an agreeable sight to witness the embarrassment of a harassed peddler attempting to gauge the symmetry of a peeled onion, which a sibyl has stabbed with her poniard, regardless of the innuendoes of the lilies of a carnelian hue."

From a Prize Winner.

To Editors of PLAIN TALK:

BEG to inform you that I have read both books, viz:-"Brawn and Brain" and "Student's Manual," received read on the subject. It is a No. 1 book, many thanks for the same. I have not been competing for some time but am not out of the race; will begin again; I want to give others a chance too, -J. W. FALKNER, Freeport, Pa.

A Bright Young Natural History Student.

SMALL boy's class in natural history.-Professor-A "Animals that have no feet and crawl along the ground are called reptiles. Who can give me an example of a reptile?' Young Brown—"A worm." Professor— "Excellent." Now will some boy think of a second reptile!" Young Jones-"Another worm."

· PLAIN TALK · ·

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PLATE TALK will be stoped an expraction of subscription when the publishers are no requested, but notes no requested, but notes no requested it will not be stopped. Subscribers ill please note this fact. We have no desire to force the paper upon its readers, and a simple request to stop will be all that is necessary, but unless this request is received it will be continued.

ADVERTISING RATES.

Per line per insertion, 10 cents; per inch, \$1.00° per column, \$8.00. Space | s than one column must be paid at inch trates; less than one inch at line rates.] in per cent, discount for six months; 20 per cent, for one year. Rates invariable a d all advertisements subject to approval.

Entered as second-class matter at the New York, N. Y., Post Office.

NEW YORK, AUGUST, 1890.

SUBSCRIBERS who wish to send exchange notices should give careful attention to the rules governing that department before writing their notices.

THE golden-rod is the choice of 81,308 of New York's school-children, who sent in votes to the Superintendent of public instruction, the rose having 79,666 votes, the daisy 33,603, the violet 31,176, the pansy 21,202, and so on. About 125 different varieties were voted for, and the total number of votes was 318,079.

"DRAG is a good dog, but Holdfast is better" So runs a B homely old saying. And there is frozen truth in it. Be sure you are at the right thing, and then stick to it through thick and then. Reward will surely follow persistent, well-directed effort. Don't let a small measure of success satisfy, but push on, and on, for the better things that are ahead.

THE publishers of PLAIN TALK have a small fund from the proceeds of which they have been able to send free copies of the paper to a limited number of readingrooms and the like. Mr. Morris O. Ezekiel, the Secretary of the Children's Library Association, 590 Seventh Avenue, Niw York, writes: "I desire to extend to you, on behalf of the C. L. A., thanks for your generous offer. * * * · Your paper is, I think, a model of what it claims to be, and should be patronized by every family."

THIS is a day of societies and of organized effort in all directions. One of the latest organizations is known as the American Wild Flower Club, the office of its secretary being at Wilmington, Del. Its object is the preservation, cultivation and gradual dissemination of our native wild flowers. Branches have already been organized in many places. There is no entrance fee for branches, nor are there any dues or assessments. If any of our readers are interested they can obtain further information by addressing the Secretary at Wilmington. No other address is necessary.

"Y OUNG men," says the Medical Record, "the first question your employers ask themselves when business tion your employers ask themselves when business becomes slack, and when it is thought necessary to economize in the matter of salaries, is: 'Who can best be spared?' It is the shirks, the makeshifts. Young men, please re-

member that these are not the ones who are called for when responsible positions are to be filled. Would you like to gauge your own future for a position of prominence? Would you like to know the probabilities of your getting such a position? What are you doing to make yourself valuable in the position you now occupy? If you are doing with your might what your hands find to do, the chances are ten to one that you soon become so valuable in that position that you cannot be spared from it."

An Interesting Theory.

CURIOUS theory has been advanced by Jacob Reese, a metallurgical engineer of Philadelphia. that the earth is a great dynamo, revolving around its axis at a peripherical velocity at the equator of more than 1,000 miles an hour, a much higher speed than is attained

By virtue of the dynamic action of the earth electricity is drawn into it. And as the dynamic action is largely due to its velocity, and the velocity being greatest at the equator, the dynamic effect will be greatest at that point. Hence the greatest amount of electricity will be drawn to the

earth at the equator and the least at the poles.

Temperature being the measure of molecular activity (as weight is the measure of matter) the temperature will be highest at the equator because the molecular activity is greatest at that point and so the temperature will be less and less as we pass from the equator toward the North or the South poles, because the peripherical velocity grows less and the dynamic action is diminished. The phenomena we call sun rays are produced by the electric currents drawn

Matter per se is imponderable and inert; it is endowed with energy by the physical forces, and is thus made electrical. The different elementary bodies are endowed with energy in different degrees, hence they vary in their electric capacity. The phenomena of weight and specific gravity are caused by the dynamic action of the earth drawing all matter containing electricity to it, and consequently as the matter is differently endowed with electric power, the dynamic effect in drawing it to the earth will vary accordingly. We thus find that the difference in the weight and the specific gravity of matter is caused by the dynamic action of the earth.

Matter may be divided; the end of physical division is the molecule. Sir William Thompson, an expert in molecular physics, says that there are nineteen million million million molecules in a cubic centimeter of any gas. this we learn that the particles that compose the atmosphere are infinitely small. The dynamic action of the errth drawing the electric sun current through the atmosphere forces these minute molecules into such a high state of activity that they exhibit the phenomenon we call sunlight. Sunlight being produced by the molecular activity of our atmosphere, is confined to it, and darkness prevails between our atmosphere and the sun.

The electricity drawn into the earth by its dynamic action increases the molecular activity of the material, and as the electric currents approach the center of the earth they focus, and by their aggregated action the molecular activity of the earth is increased to that velocity that exhibits incandescence. Thus we find that the heat of the earth is not produced nor is it sustained by the combination of fuel, such as coal, oil or natural gas, but is generated and sustained by the dynamic action of the earth.

The greatest peripherical velocity, and the greatest dynamic action being at the equator, the greatest amount of incandescent matter will be found beneath the torrid zone, and for this reason volcanic action will be confined to that

locality.

The normal path of energy is from the higher to the lower degree of activity, hence the electricity drawn to the earth by its dynamic action passes from the higher peripherical velocity to the lower velocity near the axis, and from thence out at or near the North pole and from there to the North Star, thus producing the Northern lights and an arctic open polar sea, for the electric current passing out at the North Pole will put the water into such a high state of activity as will prevent its freezing, notwithstanding the low peripherical velocity of the earth at that locality.

Scotch Weather Wisdom.

WHEN the moon is on her back, Gae mend yer shoon an' sort yer thack When round the moon there is abrouch Are tokens sure o' a bonnie day; E'en gray an' mornin' red, Put on yer hat or ye'll wet yer head. 'I will be the walth for the state of the If Candlemas day be dry and fair. The hauf o' the winter's tae come and mair: If Candlemas day be wet an' foul. The next o' winter's gane at Yuel. Be it black or be it white, March dust and March wun' Bleach as well as summer's sun; March dust an' May sun Mak' corn white an' maidens dun. Mist in May an' heat in June Mak' the harvest unco sune.

A Study of the Collections of School Children.

M ISS Sara E. Wiltse, who has been for several years a systematic observer of ability. systematic observer of childhood, has lately sent to the writer, along with a mass of other valuable but as yet undigested material, the answers of 227 Boston school-boys of fifteen and sixteen years of age, to a short set of ques-tions about their collections. Of this number only nineteen had never made collections they deemed worth reporting. One hundred and forty-four reported collections of two kinds of objects; ninety-five of three kinds; twenty-eight of four kinds; and a few of five and more kinds. Stamps were most frequently collected; then followed in order of frequency, coins; marbles, sometimes to the number of several thousand; advertising or, business cards; pictures; stones, ores, minerals; and sometimes even bits of brick and chalk; woods, leaves or flowers; insects, eggs, shells; scrap-books of all sorts (generally funny-stories), imprints of the die of local post-offices, riddles, autographs; buttons, nut-galls, birds'-nests, smooth or colored stones, and even toad-stools, peachstones, lists of names, tools and many other things. Of the three most common collections, that of marbles nearly always comes first, and begins, on the average, very soon after the beginning of public school life, and lasts from three to six years. The passion for stamps comes later, and coins later yet; the average interval between the latter, as well as their duration, cannot be inferred from the data. These collections have been made quite independently of school work, and, so far as can be inferred from the writing, spelling and syntax of the written returns, the brightest boys have made most collections, and in each of these respects the nineteen boys who have no collections to report are below the average, though by no means always the worst.

Several observers have sent in returns from school-girls of equal age to similar questions, but as yet the returns are too few and too imperfect to have much statistical value. It appears, however, that the passion for collections is less strong in girls, and the objects most often collected are different. Little girls often collect bows from adults, keeping tally on bits of paper, and older girls collect flowers, cloth and paper patterns, bric-a-brac, keepsakes, etc., as well as in many cases making the same collections as the boys. It is evident that more data are wanted for both sexes before the effect of age, temperament, locality, conditions of life, sex, etc., can be determined, and it is to be hoped that teachers or superintendents who have superior facilities will address themselves to further studies of this impor-

It seems already plain, however, that this instinct is a strong and almost universal force in human nature, which the school should study and use more than it does. is one of the chief juvenile expressions of the instinct on which the induction and specialization of natural science rests. Museums of all sorts and sizes: literary collections and even the gathering of the above data about this instinct rest upon it. In fact, almost any and every interest may prompt collections, and be made the nucleus of scientific culture sometimes for the very boys who get least from the

ordinary school. There might easily be in most country towns, if not in each school building, small working collections, made largely by the children themselves, illustrating local geology, woods, plants, birds and animals, mounted or put up in the most educational way, and, with a few pictured books, made the basis of general or class exercises. This, we believe, may at least be suggestive in solving the great question how more and better natural science may be taught in schools of the lower grades. Teachers of literature, also, even in lower grammar-school grades, have induced their pupils to gather from many sources, by scrap-books and otherwise, literary specimens which especially interested them, and thus, as it were, to make individual reading-books-their own in a sense which is of great educational significance.

But if data like the above show the force, they do not suggest the danger attending this passion, viz.: that it degenerates toward the blind mania for collecting objects (Sammeltrieb) seen in certain forms of mental disease, and even in some species of animals. Our returns show scores of boys who collect stamps or coins with very little of the knowledge of the geography and history needful to give a rational interest to their collections; who gather blindly and mechanically large numbers of eggs with no knowledge of the species, or merely the tails of birds or squirrels, with not only no knowledge of their characteristics or manner of mounting, but without even the most common hunter's knowledge of their habits. When we reflect how much might be taught incidentally by the rapid way of suggestion, if given while these interests were at their hottest, and put tactfully, perhaps in the form of directions for improving collections already begun, we can realize how considerable is the educational loss.

And yet correctives are not so easily made effective as would at first seem. Collections do not always imply the knowledge or even the high degree of mental curiosity they are wont to suggest. Museum values and scientific values are often divergent, and may be almost opposite. Much might be written of the cases in which undue haste to catalogue or to collect had robbed objects of scientific worth. How often, again, do we see in our laboratories even advanced students making and mounting histologic sections day after day, to get good collections of slides, in a thoughtless and mechanical way, or even in original research repeating observations and enlarging protocols without so carrying everything in mind that each product is subject to the highest degree of scrutiny it is capable of as they go along, and thus lose time under the illusion that they are doing real scientific work. It is such hard work to think, and there are so many proxies and simulacra of thought that deceive even well-trained men-it is so much easier to get ready to think as the miser hoards in order to get ready to live-that the way of true science is indeed straight and narrow.

All this, nevertheless, does not make us for a moment doubt that this is an educable instinct and that it has head enough, wherever it is wisely turned on to school mechanism, to quicken especially all those elements of school work that are associated with Comenius, Locke, object-lessons and science-teaching. It is not ready-made, purchased, but individual collections, with the sense of personal ownership on the part of those who made them in no wise relaxed but used in a way to make the school-house interesting, because reflecting at the same time the local characteristics and local pride, that we need. How each of the above kinds of collections and others can be best utilized in or by the school, is a problem which only the experience of the practical teacher can solve; and when it and the other unfinished questions above suggested are determined, it will make, if we are not mistaken, a valuable as well as for the most part a new chapter in pedagogy.—President G. Stanley Hall of Clark University, Worcester, Mass., in the

A Bright Young Natural History Student.

SMALI, boy's class in natural history .- Professor-A "Animals that have no feet and crawl along the ground are called reptiles. Who can give me an example of a reptile?" Young Brown—"A worm." Professor—"Excellent. Now will some boy think of a second reptile?" Young Jones—"Another worm."

American Archæological Association.

President, A. F. Berlin, Albentown, Particle President, Dr. D. S. McArthur, Lacrosse, Wis. Food President, Dr. D. S. McArthur, Lacrosse, Wis. Food President, Dr. D. S. McArthur, Lacrosse, Wis. Townsor, E. J. Shentinska, 25 Adelphi Street, Brooklyn, N. Y. Libratian, Chas, A. Perrin, 25 Adelphi Mass. Condictive Interior. Condition. Condit

Secretary's Report.

OWING to the absence from town of Mr. Wigglesworth, the chairman of the Board of Trustees, the ballots for the election were delayed in being mailed. However before this number is printed I think the ballots will all have been sent out, and it is hoped that every member will make it his duty to see that his vote is returned as speedily as possible.

Some of the members are bestirring themselves in the way of getting new recruits and others, I believe, could do much in this line with little trouble. Application blanks are furnished by the secretary to all who desire them, and these if distributed liberally among collectors would be the means of having many join the association, who are now unacquainted with it. Let us see how much each member can do in this matter.

Following is a list of

New Members.

No. 35. G. W. Robinette, Flag Pond, Va.

36. Jno. Valdes, Jr., Taos, New Merkersburg, W. Va.

37. Wm. T. Miller, 1021 Avery St., Parkersburg, W. Va.

38. H. L. Cadwaladte, Coronado, Kan.

APPLICATIONS FOR MEMBERSHIP.
D. Levering, 31 Shaw St., Jonca, Mo.
References: J. P. Vance, J. F. Frye. The following members have been dropped for non-pay-

ment of dues.

No. 17. Chas, A. Hunt, 233 Shelby Av., E. Nashville, Tenn. No. 27 Richard O'Flynn, 214 Front St., Worcester, Mass. No. 30. C. F. Mosely, Bergen, N. Y.

The latter can only be reinstated by applying to the offi-

This should have appeared some months ago, but through error was omitted.

ALVAH DAVISON, Secretary.

Archæological Chatter.

WINNEBAGO chieftain, then living in Illinois, once told an old settler, a friend of the writer, that they never made the grooved axes used by them; but found them That they were made by a race of people living there many years before. As my acquaintance and the Indian were fast and intimate friends, he undoubtedly told him the truth.

It was for a long time unknown to archæologists, how were made the fine discoidal stones found in the West and South. The mystery was solved recently by the discovery, in the corundum region of North Carolina, of several fin-ished and unfinished discoids, corundum in fine grains, and a long pestle-like object, which, with the aid of corundum, was used in forming the circular depressions on both sides of these interesting objects.

Grooved axes were often kept as heirlooms in the Indian family, and they could be obtained only through much coaxing or good pay. And no wonder. An able archæologist tells us that often it took almost a lifetime to bring to perfection a fine axe. As fine a finished and polished axe as can be seen, found in a mound in Ohio, resting in the writer's collection, seems to attest this assertion.

Did any of my archæological readers even carefully examine the perforations in those relics, which, for want of a better name, are called 'gorgets?' Dr. Rau calls them "pierced tablets." a more appropriate name. If so, has any one ever discovered signs of wear? Perhaps in the rarest of instances. Who can tell what they were used for? Almost all of them are made from the soft substance called slate. and if a raw-hide cord had been placed through them there would be evidence of it. Several years ago was promulgated the ingenious idea that they were fastened to the inside of the left wrist to protect it, while holding the bow, from the returning cord.

A beautifully polished grooved axe in the writer's cabinet, weighing thirteen and one-half pounds, was found fractured. On each side of the crack, which runs obliquely

through the centre of the blade, above and below the narrow sides of the axe, are shallow parallel grooves. show that the axe had received repair in some manner and was in this condition when buried with the body of the owner. Now, how was used this heavy and unwieldy implement? Even a giant would have trouble in handling it. It, with a number of other implements, was ploughed up from a low mound near Elmira, Stark Co., Illinois. are attached several more curious points which makes it one of the most interesting objects in the writer's collection.

In the writer's gathering are a series of 20 or more arrow-points of the rarest form called a tanged leaf shape. The writer gave three to Dr Rau, the late Curator of the Smithsonian Institution and U. S. National museum. In a letter acknowledging receipt of the specimens, he says that the three sent were the only ones now in this immense collection. He also writes that but two of this form had ever before been seen by him. One in the collection of Dr. Davis—Squier and Davis—New York, and the other found by him in a shell-mound at Keyport, N. J. Mine were all obtained in the vicinity of Allentown, Pa. As the country where these rare points were found was once owned by the Delaware or Lenn-Lenape Indians, it is safe to infer that they were the markers.

Mr. C. A P. asks in last number of PLAIN TALK, to know if any Imember of the A. A. A. ever saw a scraper showing evidence of having been used. Yes, the writer's cabinet contains several such implements. The cutting edges are worn quite smooth. They are of the so-called "sheaf of wheat" pattern, because when placed on their tanged ends, on the end opposite to their scraping edge, they simulate a wheat-sheaf. All of them are flaked equally from both sides. The finest of them was picked up from the surface a number of years ago, on Jeter's Island in the Lehigh river at Allentown, Pa. It is formed from a piece of dark red Jasper, and as near as I can judge, its edge is worn down about one-sixteenth of an inch. We also find here those having a beveled edge. One of these in my cabinet, beautifully chipped and perfect in form, measures in length 1/2 inches by 1/4 inches wide at broadest or scraping part. I never saw a smaller specimen. My cabinet also contains a number of scrapers made from broken spear and arrowpoints.

Mr. L. W. Stillwell is all at sea in his theory that the mode of manufacture of the Oregon arrow-points is a lest art. It is true the Indians now living there know not how they were made. The reason is obvious. But for all that, we know all about their manufacture; know it as well as if we had seen the makers at work. As well might he say because none of the Indians living know how their axes, celts ornaments, &c., were made, that this, too, was of the arts lost. A careful and scientific study and examination has unfolded to us how they were formed. We know that perforations in relics were made with wood aided by sand and water. The holes still show the concentric rings. We try to bore a hole on this suggestion and find our theory holds out. The writer saw at the Centennial of 1876, at Philadelphia, three beautiful arrow-points chipped from green bottle glass by a California Indian but a short time before. If time permitted a dozen authorities could be quoted here, who saw the manner in which the aborigine chipped his

Do you wish any more gabble?

A. F. B.

Scrapers.

IN THE July number of PLAIN TALK, "C. A. P." alludes to I scrapers showing no evidence of having been used. I have procured and found hundreds of these in Ohio and West Virginia. Tthe cutting edge does show wear, and probably had been used as tools, for encising on slate and other soft materials. I find them in every variety of stone. Those found on the Ohio River Shore and ancient village sites above our city show much wearfrom the use, and average about the size he stated. They are made with great care, and mostly are made from jasper, agate, chert and chalcedony. They are not very rare in this locality, as in Ohio. If C. A. P. would like to have me send him a few specimens showing this peculiarity, I will gladly do so.

WM. T. MILLER, Parkersburg, W. Va.

USE AND ABUSE OF THE BRAIN.

Dr. William A Hammond, in a lecture before the Industrial Educational Association in New York city, expressed

himself as follows:

"It is well for us to know that the emotions cause more mappiness and crime than any other function of the brain. Human beings are governed by their emotions, and it is well that they should be, though it is emotions that wear away the brain. It is the emotions, such as anxiety, fear, sorrow, and love. I consider that eight hours are sufficient for a man to use his brain, because if he sexeed that time he becomes nervous and fretful, and an exhausted brain is an irritable brain. The men that work at night with their brains are the ones that expose themselves to danger and death, which will surely come unless the great strain on the mind is lightnend.

Any man that neglects the first warning of a brain or about to break down, is not only a fool, but a criminal. These signs are not many, but they tell the story of coming dangers only too plainly. Headache, sleeplessness, irritability of temper, neuralgic pains about the head and heart, unrestful sleep, nervous dyspepsia, dull eyes, heaviness of the head and stupid feeling after meals, worry about trifles, unreasonable anger, tingling and numbness in the limbs, cold feet and hands, flushed face and burning ears, palpitation of the heart, and irregular, weak and unsteady pulse—when you note these symptoms beware: the brain and nerves are about to break down, and it may mean insanity, perhaps death."

HEELS.

How they Wear, and Why.

The heel of a shoe seldom wears away evenly across the bottom. Generally it wears off on the outer side first, causing the shoe to run down on that side. This is sometimes the fault of the shoe, but more often it results from the shape of the leg and the manner of walking. When the outline of the sole does not conform to the outline of the foot there will be more or less strain brought to bear upon the former in walking. The foot will constantly be trying to assume its proper position, and in the end will force the sole to yield, thus inclining both it and the upper toward one side or the other.

Frequently the manner in which both sole and heel are worn away is the result of the wearer's mode of walking. For instance, the man who is bow-legged naturally treads first in walking on the outer side of the shoe. The effect of this will be to wear off that side in advance of the other parts. With the man whose knees turn inward, which is

termed knock-need, the effect will be the opposite.

A man who is below the medium height aimost always takes longer steps in proportion to his size than one who is taller than the average, for the reason probably, that the shorter man lengthens his steps to keep pace with one of a higher stature, and the latter diminishes. On this account the heels of the shorter man's shoes will wear off quickly at the back, those of the taller with more uniformity. When the legs are straight and the toes are turned slightly outward in walking the sole—if properly shaped to the foot—will be apt to wear off evenly across the ball, while the wear of the heel will be at the centre of the back, and will be greater or less in proportion to the length of the step taken.

A row of steel nails driven in that part of the heel which first feels the effect of wear is the usual remedy for these irregularities, but in bad cases it will be found to be a benefit to trim the side of the heel which first wears away nearly straight up and down; this by allowing more leather on that side, will retard, to a great degree, its wear.

Steel nails at the back edge of the heels are economical as to leather, but when closely set and smoothly worn they are a source of danger to pedestrians, but little less than

the banana peel on the sidewalk.

Instances of narrow escapes from sprains are frequently seen in which the foot, while striking the back edge of the heel in rapid walking, slides uncontrollably forward, leav-

ing long scratches on the smooth flagging to show the result. The longer the step the more danger there is from this cause. A few nails, set at greater distances apart, would insure safety by furnishing more surface of leather, and consequently more friction for contact with smooth payements.—Shoe and Leather Reporter,

The Merits of Steam and Sailing Vessels from a Sanitary Point of View.

A correspondent writes: "I am glad to see in the Lancet an article saying so much in favor of sea voyages, but I think you have omitted one very important point, viz: the great advantages of a sailing ship over a steamship, such as the greater cleanliness, freedom from smoke, and, especially the freedom from the most unpleasant oily smell of the engines; also the greater size of the cabins. 'I speak from experience of a voyage to Australia and back in sailing ships, from which I derived much benefit. I was lately in a steamship and was greatly surprised at the difference; go where I would on the ship I could never escape from the oily smell of the engines. The food on the sailing ship was very good indeed."

Exigencies of space forbade a comparison of the merits of sailing vessels and steamships in the article to which our correspondent refers. The point is, however, well worthy of attention, and the advantages of a sailing vessel enumerated above are real and important. A sailing vessel is usually cleaner, quieter, and roomier (in proportion to the number of passengers) than a steamer, and on a long sea voyage the importance of cleanliness, quiet, and space can hardly be overestimated. If no other consideration had weight, it would not be difficult to lay down the rule that for invalids a sailing vessel should always be preferred to a steamer.

For serious cases a sailing vessel, always provided that reasonable comfort can be assured, will generally be preferable. Life on a steamship is too much like life in a hotel to suit such cases. Again, if the patient be specially desirous of rest and quiet, a sailing vessel will best meet the case.

AS regards the effect of the Black Death upon the social and industrial system of England, Dr. Cunningham agrees to a large extent with Mr. Thorold Rogers, but with respect to its destructive influence upon the population he occupies a middle ground between the latter writer on the one hand and Mr. Denton on the other. The terror which the Black Death caused is visible in the extraordinary change which was brought about at this epoch in the artistic representations of death; the horrors of the actual visitation can be faintly indicated by statistics. The chief sources of statistical information are, for larger areas, the records of the institutions of clergy to benefices, and, for particular villages, the records of the court rolls. While the former documents seem to show that, with all allowances for the ordinary death rate, more than half the parish priests died during the year (1348), the latter give instances where whole villages were practically annihilated. In Dr. Cunningham's opinion we shall not be far wrong in aspin that nearly half of the population were swept away at this time.

A N the Jersey City ferry-house of the Pavonia Ferry, a few days ago, the passengers watched with much interest a flock of sparrows taking care of one of their number, who was evidently very sick. There was much chippering among the birds, until it was finally settled to put the patient behind the top cornice of a pillar. The sick bird was then carried between three of its companions and defly dropped into the chosen place. Then a dozen sparrows perched on the telegraph wire and chippered loudly at the passengers beneath. When last seen the sick sparrow was bundfled up in some straw.

RESH air, sunlight, good and sufficient food, pure water, out-door exercise, temperancee in all things, and a cheerful disposition, are the chief remedies in nature's pharmacopeia, and are worth more than all the drugs and medicines of ihe shops.

LADIES' DEPARTMENT.

This department is under special editorial supervision. Contributions solicited. Address "Rebecca Sunshine," in care of Plain Talk.

The Papers Say So.

MRS. CLEVELAND'S total collection of diamonds, set and unmounted, is estimated as being worth certainly \$50,000.

Mrs. D. C. Bloomer, who made herself a social martyr in has lately celebrated her golden wedding, in conventional raiment, at Council Bluffs, Iowa.

Miss Harriet Blaine, the youngest of the three daughters of Secretary Blaine, is much the prettiest, if not the cleverest, in the family. She is still a student, but aspires to be her father's private secretary, and confidential friend, as her mother has always been.

Miss Annie Geisinger, a missi onary of the Presbyterian board of missions, is resting in this country for a year. She was some years ago a domestic servant, and performed her duties so faithfully and well that her mistress was prompted to give her a thorough education.

Mrs. Livermore says that her husband is a republican while she is a prohibitionist; he is a protectionist while she is a free trader; he has a pew in one church and she in anoher he has one doctor, she another; and yet they are happy and harmonious and never dream of quarreling:

Miss Elaine Goodale, Government Supervisor of Education among the Sioux who live in camp or reservation in the most primitive way, traveling from Indian villages on horseback or in "prairie schooner," is a handsome young woman, a fine scholar, and true poet, who deliberately prefers this missionary service among a hapless people to the social success which she seemed destined to command.

Mary Walton of New York City discovered and patented a remedy for the intolerable noise of the elevated railroad, in three days' time, after Edisen, the great electrician, had failed after a two week's endeavor. She received \$10,000 and a perpetual royalty. Nelly Patterson is the only woman machinist in Connecticut, but she can turn out as good a piece of work as any man in her trade, and earns as good wages.

Friendships of Girls.

F YOU write a letter to a man friend, don't put in black and white the your are the black and white that you are "his forever," or that you send a great deal of love, even if it be only in jest, either his "very cordially," or "very sincerely." Sincerity and Sincerity and cordiality are possible with acquaintances that do not demand either love, or an affection that is to last forever. I wish girls knew how very ill bred it is to give, or permit familiarities in word or pen from either men or women. Learn to keep your personal affairs to yourself. Learn to believe that your first name can only be used by those connected with you by ties of blood, or having the right given by a Believe me, you will never regret your self respect as shown in this way, and you will never cease lamenting permitting a too familiar intercourse, that in the future will rise up before you like a skeleton at a feast. A perfect friendship is like a rose, after the time of its glory is passed the leaves may be thrown into a jar, covered with spices and salt to bring out the fragrance forever, and be a delight to you wherever it is. A friendship that is too familiar may also be likened to a rose, but one that early loses its leaves; they fall upon the ground and no one treasures them enough to gather them up and keep them as memento of days that have gone by. For a while there is a sickly sweet smell, and then they are blackened and discolored, and no odor comes from them. Conclude then, in forming your friendships, to make those only that can, when time separates you two, make a pleasant memory for the future, and one that will not cause a blush to come upon your

How to Write a Letter.

WRITE the date distinctly, the day of the month and year—not just the day of the week.

Write on plain, unlined paper. Write your ''q's'' and ''y's'' differently, their tails turn-

Write your "t's" with a cross and your "i's" with a dot.
Write an answer to your friend's questions; if she had not wanted to know she would not have asked you.

Write with black ink-pale or faded ink has broken off

write which have have the pate of raded like has bloken on more friendships and love affairs than one would imagine. Write your name distinctly. If you are a married woman sign it, for example, "Virginia Andrews," exactly as if you were not married; but if it is a business letter, the Mrs. should be put in parenthesis before your name; or, better still, the letter may be written in the third person. This same rule applies to an unmarried woman.

Write a short, crisp letter; a concentration of brightness. It will be much more appreciated than one longer drawn

Write as little as possible on the subject of love. Words of love are better said than written.

Write yourself down a bright, sensible girl, and you will then have written the very best letter that a girl can possibly write.-Ladies' Home Journal.

A Characteristic Quotation from Talmage.

THE favorite of a great house one day looked out of his I palace window and saw men carrying very heavy burdens, and some of them lying at the gate full of sores, and some of them hobbling along on crutches, and heard others bewailing their woe; and he said, "I will go put on poor man's clothes, and I will go down among these destitute ones, and I will go down among these destitute ones, and I will see one of them, and I will see what I can do in the way of sympathy and help." The day was set. The lords of the land came to see him off. All who could sing gathered together to give him a parting song, which shook the hills and woke up the shepards. The first few nights of his life he slept with ostlers and drovers and camel drivers for no one knew there was a King in town. He strolled into the house where learned men sat, and it amazed them that one without a doctor's gown should know more about the law than the doctors. He fished with the fishermen. He smote with his own hammer in the carpenter's shop. He ate raw corn out of the field. He fried his own fish on the banks of Gennesaret. He slept out of doors, because the mountaineers would not invite him into their cabins. He was howled at by crazy people amid the tombs. He was splashed by the surf of the sea. A pilgrim without a pillow. A sick man without any medicament. A mourner without any sympathetic bosom into which he could pour Through all that land he passed in disguise. Occasionally his divine royalty would flash out, as in the Gennesaret storm; as in the red wine at the wedding; as when he freed the shackled demoniacs of Gadara; as when he swung a whole school of fish into the net of the discouraged boatmen; as when he throbbed life into the wasted in disguise. No one saw a King's jewel in his sandal. No one saw a robe in his plain coat. They know not that that shelterless man owned all the mansions in which the heavenly host have their habitation. They knew not that he who cried, "I thirst," poured the Euphrates from his own chalice. They knew not that the hungered man owned all the olive gardens, and all the harvests that shook their gold on the hills of Palestine. They knew not that the worlds that lighted up the Eastern night were only the glitteriug belt with which he clasped the robes of his glory. they knew not that the ocean lay in the palm of his hand like a dew drop in the vase of a lily. They knew not that all the splendors of the noonday were only the shadow of his throne. They knew not that suns, and moons, and stars, and galaxies, marching or for ages in cohorts of light as compared with Christ's life-time were less than the sparkle of a fire-fly on a summer's night. sheathed in a human arm. Omniscience hidden in a human eye. Infinite love concealed in a human heart. harmonies subdued into a human voice. Honor cloaked in shame. The royalty of heaven passing in earthly disguise.

NATURAL HISTORY.

Contributions to this department are solicited from all readers. Questions will be answered by competent authorities.

Curiosities in Birds' Eggs.

T MAY be taken as a general rule that the eggs of most birds vary more or less as regards size, shape and coloring. Guillemots' eggs vary in ground color from grayish white to grass green. The eggs of the red grouse, the rook and the plover also vary to great extent, both in coloring and marking. It sometimes happens that birds whose eggs are usually bright and artistically colored, will lay pure white ones, an instance of this in the case of the House sparrows' eggs have likewise been taken quite desti-tute of coloring; while blackbirds' eggs have been found

The white eggs are probably due to anxiety, fright or other causes, while those of unusual color may result from only one aberrant egg is found in the nest with several others of the normal hue, it is not so easy to account for

Coupled with this variety in coloring and marking there is frequently an abnormity in shape and size. by no means unusual to find thrushes' eggs quite destitute while others are taken with all the marks and spots agglomerated into a blotch at the larger end. But by far the most extraordinary markings to be observed in birds' eggs are due, without doubt, to mimetism. The writer has a guillemot's egg upon which are depicted most faithfully

executed as many a school boy's figures and writing. Upon the same egg are also to be seen rude sketches of heads of several grotesque figures.—Hardwicke's Science

Crickets as Pets.

THE Chinese keep crickets and fight them as the Spaniards keep and fight cocks. The cricket is musical and jealous. He is easily enraged and fights to the death resentful traits one should confine a pair in a glass jar in which moss has been laid, with a stone or two so arranged tender note and every act of affection will mark the conduct of the male. But when a second male is put in the

little heed of the combats, declines to act as nurse or sympathizer, and calmly sees the crippled and dying males about her without a show of pity. All her pretty attentions are for the sole survivor, and with him she will associate with pleasure and show every indication of interest in his softly chirped serenade. Crickets are small insects, but for fighting qualities they are the bull-terriers of the

Rapid Travelers.

THE rapidity with which insects travel is quite astonishing, often exceeding the speed of the swiftest horse. The common house-fly is computed to make face florse. The common house-ny is computed to make 600 strokes per minute in ordinary flight, advancing twenty-five feet, but this rate may be increased to six or seven times as much. Leuwenholk tells of a dragon fly which, in a menagerie one hundred feet long, suca dozen pigeons, the first bee finished the distance of three miles, nearly a quarter of a minute in advance of to travel more than one hundred miles in a single day.

Birds for the House.

OLIVE THORNE MILLER contributes to the Inly issue of The Chautauguan an article on "New Birds for the House," mentioning among the American birds that make interesting pets the cat-bird, the grosbeak, the redwinged blackbird, and the bobolink. Of the cat bird she says: "Of all droll and amusing pets this bird is thechief. So ingenious in conceiving, so prompt in executing his pranks, and at the same time so irresistibly comical in his ways is he, that one never tires of watching him, and readily forgives him any mischief that may result. Moreover he is the most fearless, and perhaps, the most graceful of his family. Nothing daunts him. If your attitude toward him is teasing, he accepts, and pays you back in ways you would never think of, seeming to enjoy it as much as bigger folk enjoy their teasing; if your bearing is gentle and affecloving himself, although he doesn't forego his frolics. He is a delight to the eve in any attitude he may take. flying about the room is the poetry of motion; the constant movements of his long tail express every possible sentiment. He is also more playful than any other bird I know.

GEOLOGY.

CONDUCTED BY S. H. WOOD.

WHY not have an association for the exchange of geo-

but to me the fossils in the Wenlock limestone are the most interesting. Among the corals in which this lime-stone abounds the "chain coral" known as *Halysites catenu*latus may be placed at the top of the list of "interesting fossils." It is easily recognized by a new beginner and is Silurian laver.

In our next issue of notes we will endeavor to give an account of some Rocky Mountain minerals, how they look, and how the place looks they were found in; "yours truly"

A new mineral to be called Wurtzilite in compliment to Dr. Henry Wurtz was recently discovered in Utah in the Ulintah Mountains and described by Prof. W. P. Blake as follows; "The new substance differs essentially from any hitherto described. It is a firm, black solid, a little heavier than water, and breaks conchoidal tracture. It is sectile and cuts a little like bone or whalebone. It is allied to bitumens and asphalts and can be used for purposes to which and it is believed will make a good insulating material if it can be mixed with other substances so as to give a flexible

Science in general, and especially in Geology is in fair play in Denver at present, especially the trade with tourists. sold as much to tourists as was sold all last season. This

In examining the different minerals you do well to study broken off would be complete and perfect in itself. I suppose that after their first formation the silica again acted upon them and fastened them together. Though quite a large number are in existence it is to me an oddity as it is the first one I have seen.

Young collectors should show more interest than they do, in such ways as telling others what they find in their part of the country. This does by no means mean simply the young collector but every one. Send your notes along

Geo. S. English & Co's new catalogue is indeed a

ALL SORTS.

"And still the wonder grew
That one small head could carry all he knew."

Something About Speed.

T AVERAGE speed a man walks three miles an hour, or four feet a second; a horse trots seven miles per hour, or ten feet per second; a steamboat moves eighteen miles per hour, or twenty-six feet per second; a moderate wind blows seven miles per hour, or ten feet per second; a storm moves thirty-six miles an hour, or fifty-two feet per second; sound travels 743 miles per hour, 1,142 feet per second; light moves 192,000 miles per second, and electricity

How Many Cents Make a Pound?

THE copper used in the manufacture of pennics is of the very best quality. The metal is shipped in bulk from the mines to the factories in Connecticut. There it is rolled and stamped out in circles of required size. circles are perfectly plain with the exception of the raised or mille ddge. At this stage the pieces intended for pennies are as bright as gold pieces, while those intended for nickels resemble highly polished silver. In this condition they are delivered to the mint. Of course, it is absolutely necessary that all the pieces should be of uniform size and weight.

The transfer from the factory to the mint is made, and the number of pieces in a package is reckoned by its weight. To find out how many small coins the amount of nickel and copper contracted for at present will make, multiply the number of pounds of copper by 100 and the number of pounds of nickel by 70. The calculation will show that the metal now about to be made up into coin will make 35,000 nickels and 100,000 pennies. One hundred pennies, therefore, weigh exactly one pound. When these pieces reach the mint they are subjected to the finishing process, which consists of stamping them with the denomination, lettering and characters seen on the coins when they reach the public. To accomplish this, great pressure is needed, as the pieces are not heated again after leaving the factory. amount of pressure required is simply enormous, consider-

Agricultural Multiplication.

"One hundred."

"Then you have bought some more, you had only twen-

"No, I haven't bought any, I haven't had any given to me, I haven't rented any. Still I claim that I have got one

"How do you make it out?"

"Just this way. I bought twenty acres. I plowed it thoroughly, utilizing every foot of ground, making, on an average, one acre equal to two. That gave me forty acres."

"I then fertilized the land so that one acre produced as much as three did before. That made me twenty acres more, making the total sixty."

"Then I practiced persistent cultivation, which I can prove will double the yield of an acre. Twenty acres more, you see, which makes me eighty."

"Yes, and now for the other twenty."

"The other twenty I got by using only the best of seed and by putting brains and system into my work. And to prove that my farm contains one hundred acres, I am willing to compare results with the average hundred acres anywhere in this section of the country. Things equal to the same thing are equal to each other, you know."- Western

IFE is a quarry, out of which we are to mold and chisel and complete a character.—Goethe.

A Prairie Fire.

WE ALL sprung up to see one of the saddle-horses—a veteran in years and experience-standing with his head high in the air and pointed due west. While he looks as fixedly as though his eyes had lost their power to turn, his nostrils quiver and dilate with excitement. We watch him a full minute. He was the first to exhibit alarm, but now one horse after another throws up his head and looks to the west.

Had it been night we should have seen the reflection. Had there been a strong wind the odor would have come to There is only a gentle breeze-languishing, dying under the fierce sun, but resurrected and given a new lease of life at intevals by an unknown power. But now we can see the smoke driving heavenward and shutting the blue of the west from our vision-now the horses show such signs that no man could mistake. A great wall of flame fifty miles in length is rolling towards us, fanned and driven by a breeze of its own creation, but coming slowly and grandly. It takes me two or three minutes to climb to the top of one of the trees and from my elevated position I can get a grand view of the wave of fire which is driving before it everything that lives and can move

We work fast. Blankets are wet at the spring and hung up between the trees to make a bulwark against the sparks and smoke, the horses doubly secured, camp equipage piled up and covered, and before we are through we have visitors. Ten or twelve buffaloes come thundering-pass the grovehalt and return to its shelter, crowding as close to the horses as they can, and showing no fear at our presence. Next come three or four antelopes, their bright eyes bulging out with fear, and their nostrils blowing out the heavy

odor with sharp snorts.

One rubs against me and licks my hand.

Yelp! Yelp! Here are half a dozen wolves, which crowd among the buffaloes and tremble with terror, and a score of serpents race over the open ground to seek the wet ditch which carries off the overflow of the spring. Last to come, and only a mile ahead of the wave, which is licking up everything in its path, is a mustang—a single animal which has somehow been separated from its herd. He comes from the north, racing to reach the grove before the fire shall cut him off, and he runs for his life. With ears laid back, nose pointing and his eyes fixed on the goal, his pace is that of a thunderbolt. He leaps square over one pile of camp outfit and goes ten rods beyond before he can check himself. Then he comes trotting back and crowds between two of our horses with a low whinny.

There is a roar like Niagara. The smoke drives over us in a pall like midnight. The air seems to be one sheet of flame. The wave has swept up to the edge of the bare ground and is dividing to pass us by. We are in an oven. The horses snort and cough and plunge, the wolves howl and moan as the heat and smoks become intolerable. Thus for five minutes and then relief comes. The flame has passed and the smoke is driving away. In their path is a cool breeze, every whiff of which is a grand elixir

In ten minutes the grove is so clear of smoke that we can see every foot of earth again. A queer sight it is. It has been the haven of refuge tor snakes, lizards, gophers, prairie dogs, rabbits, coyotes, wolves, antelopes, deer, buffaloes, horses and men-enmity, antipathy and hunger suppressed for the nonce that all might live-that each might escape the fiend in pursuit.

For half an hour nothing moves. Then the mustang flings up his head, blows the last of the smoke from his nostrils and starts off with a flourish of his heels. The buffaloes go next, the deer and antelopes follow and in five min-

utes we are left alone.

For fifty miles to the north, west and south there is nothing but blackness-a landscape of despair. Away to the east the wall of fire is still moving on and on, implacable, relentless, a fiend whose harvest is death and whose trail is destruction and desolation .- Detroit Free Press.

DLAIN TALK has indeed made rapid strides in the last year. The June number is a marvel.—Western Philatelist,

Her "Money-Makers."

"COME and see my money-makers, ,, said a lady living in the country, the other day, to a lady from the city who was visiting her. "These, , she said, as they came to a large and well-appointed hen-house, are my 'church hens;' all that I make out of them above expenses is devoted to religious objects. The geese you see down there on the pond are my 'poor and needy geese.' They there on the pond are my pool and needy geese. They cost little or nothing, and the profits are applied to the relief of the poor and needy. Away down beyond that wood I keep a drove of hogs, 'dress hogs,' I call them, because I buy my dresses, frocks you say, I suppose, out of what I make from them. Those Alderney cow are my 'theatre and opera cows.' I saw four Wagner operas out of the profits of one of them last winter. You see that bed of strawberries? Well, we don't call them strawberries' but 'shoeberries,' for I buy all the children's shoec and my own, too, out of the income I get from them. These and many other little money-making schemes I manage myself without troubling my husband, who works very hard in the city for a small salary. Consequently we have a great many comforts and luxnries that we couldn't otherwise have. And I thoroughly enjoy the work, too. "-New York Tribune

What Two Years Did for an "Ohio Yankee."

HE Critic recently printed the following: A long, lank Ohio Yankee, the son of a potter and himself a potter, went to Mr. [John Ward] Stimson a few years ago. The first winter was hard scrabbling, but he earned second prize in the sculpture class. Then he went home saying: "I'm going back in the belief that my services are worth more than they ever were to my employers, and I'm going to ask them to raise my wages. With what I shall earn I'll be back here to take another year's training." His employers doubled his former wages, and he returned the second year brouzed and hardy and strong as a young hickory. That year he took the first prize. Some one heard of his success, and presently the Republican National Committee wrote asking him to go to Indianapolis to make a bust of Mr. Harrison, for then the campaign was just beginning. He was ten days at Mr. Harrison's house in Indianapolis, the candidate for the presidency giving him daily sittings. The bust was on exhibition here throughout the campaign. After he had completed Mr. Harrison, Mr. Thurman sent for him to make a bust of him, and he did that with perfect satisfaction also. Now this young man is in charge of large tile-works in the interior of New York State, which produce some of the best work in the country. Last Christmas he surprised Mr. Stimson with a visit at his home in Plainfield, N. J. The artist saw him from his window coming up the lane, waving his hat, with a handsome young woman walking beside him. As Mr. Stimson opened the boor the strapping fellow sang out "Here's my wife, John; here's my wife, Mr. Stimson, and here's a hundred dollars to help along the institute for Artist-Artisans. Three years ago I was a poor boy, making a miserable living toiling in the dirt. Now I have a good and growing business and a wife and a home of my own, and I owe them all to you. It was a meeting of which both teacher and student were equally and justly proud.—From a circular of the Institute.

OBACCO may be classed with alcohol in its injurious effects upon the human system. Both are poisons, and both produce serious and fatal functional troubles. Many cases of deafness and throat diseases are found to be caused by the use of tobacco-smoking more especially; chewing and snuffing may derange the digestive and nervous systems as well.

N Grand street the other day several people cried out in terror at seeing a ragged, bare-headed girl of six almost under the feet of a coal-cart horse. A man seized her by the arm and swung her to the walk, and as he looked down

"Why, child, you might have been killed!"

"Yes, but I had to save him, you see," she replied, holding out her haud and exhibiting a sparrow which had somehow received an injury and fallen to the street.

Children and "First Aid."

HILDREN should be taught to act instead of scream in a cases of pressing emergencies. Many mothers themselves are woefully ignorant of what to do until the doctor comes, in cases that require instant attention.

A few years ago, in a school I attended, a young girl fainted and fell to the floor. In a moment the teacher had raised her to a sitting posture, and we frightened children crowded around her, wringing our hands and crying. We thought she was dead; but in the midst of the confusion, a young girl of a dozen years came to the rescue, by stretching the unconscious girl flat upon her back. In a quiet, firm voice she said, "Sarah has only fainted, and you must stand back and give her air." Instantly the circle that had been drawn around her widened, the windows were thrown open, the compression about the chest removed, and in a few minutes the young girl was herself again.

"Who taught you to act so calmly and promptly?" in-

quired the teacher when quiet was restored.
"My mother," was the answer. "Once, when my little brother had fallen down stairs and was knocked senseless, the nurse pick him up and began tossing him up and down, 'to bring him to,' as she explained. Mother took him out of her arms and laid him flat on his back on the sofa. Soon he began to breathe regularly; and then mother told us that, as fainting was caused by the failure of the heart to supply the brain with blood, the patient should always be laid down, if possible, with the head a little lower than the body, as it was easier for blood to run down hill than up.'

One of the coldest days last winter, a patient in the dental chair failed to rally from the depressing effects of chloroform, and the physician who was hastily summoned, with the help an assistant, dragged him to the door and dashed snow into his face, until the weakened actioned of the heart gave out, and the patient lay back limped and apparently

lifeless in their hands.

"Stand him on his head. That is what father does when they don't come 'round right," said a bright lad who had been attracted to the office door by the unusual stir. So the youth was turned upside down, until he began to show signs of returning animation. By that time the boy's father, one of the leading physicians of the place, arrived, and his son's timely direction was followed by proper medical treatment.

Not long since a party of school-boys were skating on the

Muskingum river. Suddenly the ice gave way beneath the weight of one of the lads. Fortunately, he grasped the rough edge of the frozen structure in time to prevent his being drawn into the cold, swift current beneath. The boys became panic stricken and ran hither and thither without attempting to rescue their companion. Only one lad out of the twenty had the presence of mind to act. He seized a stout rail, pushed it within the reach of the drowning boy, and by its help the poor fellow succeeded in reaching the solid ice. On another occasion, this same lad save the life of a companion who had accidently severed an artery, by promptly placing his finger on the vessel just above the wound, until, by his direction, a handkerchief was tied around the arm and a stick inserted in such a way as to make the necessary pressure, when twisted round and round. When the doctor arrived and took the job out of his hands, a bystander suggested that the boy should be suitably rewarded for his herioc act.

"Better give a medal to the mother who taught her son the necessity of action in such emergencies," remarked the

old doctor grimly.

A few days ago a little child swallowed some lye, and, as no doctor was at hand, the mother was at a loss to know

what to do to save her baby's life.

"Mother gave Eddie vinegar when he drank lye, and it did not hurt him at all," said the little daughter of a neighbor who chanced to come in. The mother acted on the child's suggestion and, when the doctor came, he admitted that he could have done no better had he been present. If vinegar is not at hand, oil of a most any kind will answer every purpose.—The Housewife.

WE can combat all evils successfully if we possess hope. With a superabundance of vitality and a clear conscience let us have a corner for hope.

PUZZLDOM

CONDUCTED BY "FISCO."

Address all communications pertaining to this Department to Edgar D. Melville, Puzzle Editor Plain Talk 224 Upland Street, Chester, Pa.

Answers to Puzzles Appearing in the June Number.

Cove, coke, code, come, cope, cone, core, cote.

No. 2.

No. 3.

No. 4.

New Puzzles.

A small hollow.

To make a harsh cry.

To come together.

A companion.

Zig-zag (from left) a holiday "SOLON."

CHARADE

In the prime time of the year, Are flitting o'er the meadows My first you always heep

And every care seems sped, My second darkly creeping Oft fills his soul with dread.

My whole's what we despise or shun, Or a delusion sprung from hate or fun.

No. 3. SQUARE WORD.

1. A law-giver; 2. A rambler; 3. To assert; 4. A runner (transposed) a vowel and not a sham.

INO. BRYDON.

HEXAGON.

Across: 1. A diminutive of Lemuel; Furnished with soles; 3. Merry; Loaded; 5. Side opposite to the wind.

A consonant; 2. inutive of Solomon; 3. Pertaining to a palace; 4. To escape by stratagem; 5. A broil or fight; 6. A boy's name; 7.

Prize Winner.

Mr. Whitney Livingston, Islip, New York, won the prizes offered in the June Five complete answers were received.

Prize.

A year's back numbers of a prominent magazine, containing one or more complete serial stories, and numerous short ones. In perfect order

The above named prize will be awarded on the following plan: If an even number of correct answers are received, the prize will be sent to the one sending the first: if an odd number, to the one sending the middle correct answer, unless divisible by five, when it will be given for the last correct answer.

Answers to puzzles appearing in this issue will be published in the October number, 1890, and answers will be received up to September 15th, but no answers received after that date will count.

Puzzle Chat.

The readers of this paper, who are interested in Puzzledom, are respect-fully invited to send us their efforts. We assure them that they will receive careful consideration. Then again, apply yourself to solving, for, besides gaining valuable information you stand a chance of winning good prizes. Amateur puzzlers willingly encouraged. Any information in regards to puzzlers will be gladly given to those seeking, through this column, if it lays in our power to furnish such. Send us your queries.

Our friend puzzler, Mr. Jacob S. Rupp, is editor of the puzzle department in the St. Louis Amateur and the Amateur Record. Both departments seem to be well patronized under the able management of Mr. Rupp.

The following letter was received from Mrs. Mary McClelland, who won the prizes offered in the May number:

"I want to thank you very much for the nice target gun received as a Prize for answering puzzles in PLAIN TALK. Success to your nice paper."

CORRESPONDENCE CLUB.

This bepartment is established in response to numerous requests from subserbles of the control o

A.A.A. ——Ves, members of the Ameri-can Archæological Association are admitted to all prize contests in PLAIN TALK, mem bership in the association constituting them subscribers.

B. B. B., Patterson, N. V.—Undoubted-ly the departments you suggest would be of interest to many, but the season is too farad-vanced for this year; perhaps next year they may be established. Your kind words are

D.G. F.—The 1-2d Bank of Upper Canada token, 1850, is offered for sale by the Scott Stamp and Coin Co., (12 East 23rd st., N. V.) for 5 cents in fair condition, or 10 cents in

B. B. B., Patterson, N, Y.—(1) S. H. Wood's present address is 3117 Marion st., Denver, Colo.—(2) The Academy Monthly is published at Germantown Fenn. A letter with that address will reach the publishers.

"Ignoramus."—(1) The editor is not able to say as to whether Dr. Tanner, of "fast-ing" notoriety is dead or not, although he thinks he is alive. Possibly some reader of

(2) The beginning stamp collector will find one of the priced and illustrated catalogues (for instance that issued by the Scott Stamp & Coin Co., 12 East 23rd. st., N. Y. at 25 cents.) of great assistance in enabling him to determine the year in which his stamps were

(3) We do not know who is the author of the following lines. Perhaps some reader can tell, and also give the song complete. "When other lips and other hearts, Their tales of love can tell,

In language whose excess imparts
The power they feel so well, Perhaps there may in such a scene,

Of days that have as happy been,

EXCHANGES.

Exchange notices are inserted free of charge, but it must be understood that we can take no responsibility concerning exchanges effected by means of this department, author will the reliability of exchangers be guaranteed. To avoid any intunderstanding in the matter, and the will the reliability of exchangers be guaranteed, the sound any intunderstanding the matter and the sound of the sound

Helcn C Harmon, Albany, Oregon.—Will send pressed leaves of seven different varieties of Oregon forest trees, and tree moss, for curiosities from Central America. Or will send package of both for 15 cents.

I have a few good autographs of prominent men, also fine specimens of Quartzite from this locality to exchange for minerals. Correspondence solicited. B. W. Kumler, Parker, South Dakota.

To any one sending me ten cents, (silver), \$100 in confederate money, or a V nickle without the word "cents." I will send five rare foreign and old U. S. stamps and one large scroll-saw design, address R. E Preston, Box 682, Mt Pleasant, Mich.

Mrs S R Boyden, S W Cor 113th St and First Ave, N Y. City, has miscellaneous specimens and curious to exchange for Indian relics.

I will exchange stamps, bird's eggs, and curiosities.
Correspondence with philatelists and collectors of curiosities de ired.
 K. W. Botham, Lock box 3, Putnam, Ct.

I have a two line printing-press and outfit for sale or exchan e; Please make me cash or other offers for it. If any one wants back numbe s of Poultry papers please write.

Benj. Benedict, Patterson, N J

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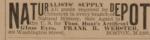
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